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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/884,306	06/19/2001	William Herbert Starnes JR.	EP 1020-CIP	6906

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HUDAK, SHUNK & FARINE, CO., L.P.A.
2020 FRONT STREET
SUITE 307
CUYAHOGA FALLS, OH 44221

EXAMINER

SZEKELY, PETER A

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/21/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/884,306

Applicant(s)

STARNES ET AL

Examiner

Peter Szekely

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-7. 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following: On page 4, line 16, and on page 5, lines 1-2, R^2 cannot be alkyl, 2-ethylhexyl, isooctyl, isodecyl, benzyl or butyl, it has to be alkylene (alkene), octylene, butylene, etc. On page 17, lines 27 and on page 18, lines 3, 4 and 15, R^3 and R^4 cannot be aliphatics or alkyls. Aliphatics are compounds not radicals and a radical having two valences cannot be alkyl.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. R^3 , R^4 , R^5 , R^6 and R^7 cannot be aliphatic because they are radicals, not compounds. R^3 cannot be methyl, ethyl, propyl, butyl, hexyl or decyl, it has to be alkene.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 4-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. "Metal based" is indefinite. Metal containing is suggested.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kugele et al. 3,979,359, Kornbaum et al. 4,412,897, Kornbaum et al. 4,616,046 or Hung et al. 5,006,436.

10. Although none of the cited references specifically mention Bis (6-mercaptohexyl) adipate. Kugele et al. lists several homologues in column 6, lines 66-68, Kornbaum et

al. ('897) teach the general formula in column 3, lines 25-41 and di (2-mercapto ethyl) adipate in column 5 and Table 1. The revelations of Kornbaum ('046) are similar. See also column 7, lines 1-3 of Hung et al. It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to make any of the adipic thioesters, since they were known and have been synthesized, having 1-18 carbons in the ester portion and 1-20 carbons in the aliphatic portion.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3 and 19-20 are rejected under 35 U.S.C. 102(b or e) as being anticipated by Kugele et al. 3,979,359, Larsen 3,966,794, Okordudu 4,198,305, Kornbaum et al. 4,412,897, Kornbaum et al. 4,616,046, Kugele et al. 4,711,920, Hung et al. 5,006,436, Okada et al. 5,294,666, Bakkeren et al. 6,476,183 or EP 0 205 261 to General Motors.

13. See columns 5, 6 and 7 of Kugele et al. ('359), column 3, lines 44-52 and Example 1 of Larsen, Example 7 of Okorduda, column 3, lines 20-41, from column 4, line 44 to column 5, line 52 and Table 1 of Kornbaum et al. ('897), from column 5, line 48 to column 7, line 60 and Table 1 of Kornbaum et al. ('046), columns 6-10 of Kugele et al. ('920), column 7, lines 1-3 of Hung et al., the paragraph overlapping columns 4

and 5 of Okada et al., column 3, lines 40-57 of Bakkeren et al. and Page 3, lines 13 and 14 of General Motors. Applicants' claims are not novel.

14. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lindsey 3,242,133, Davenport 3,652,733, Sakai Chemical Industries JP-63-241055 or Henkel KgaA DE 32 47 736.

15. Lindsey discloses PVC/PVDC copolymer with isooctyl beta-mercaptopropionate in Example 45. See also column 3, lines 32-35, Table I and Table II. Davenport teaches PVC/PVA resin, pentaerythritol tetrakis thioglycollate and benzophenone in Example 4. Henkel recites applicants' composition in claims 1, 3 and 4; while epoxidized soybean oil can be found on page 12, lines 19-20 and page 23, line 12. Sakai Chemical reveals chlorinated polymer with at least one thioester, for example pentaerythritol tetra (3-mercaptopropionate) in the claim. Metal free compositions are mentioned in "Purpose of the invention" and Examples 1-8. Applicants' claims are not novel.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Szekely whose telephone number is (703) 308-2460. The examiner can normally be reached on 7:00 a.m.-5:30 p.m. Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Peter Szekely
Primary Examiner
Art Unit 1714

P.S.
April 17, 2003